

REMARKS

This is in response to the Office Action mailed 4/25/2007. Previously pending claims 1-26 are hereby cancelled and claims 27-41 have been newly added. Reconsideration of this application is respectfully requested in view of this response and the Request for Continued Examination filed herewith.

STATUS OF CLAIMS

Claims 1-26 are pending.

Claim 1-26 are cancelled.

Claims 27-41 have been added.

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a computer-based method for compiling a structured document schema into type annotation records comprising steps of: (a) building a type hierarchy ordered tree from structured document with each type record node in said hierarchy ordered tree containing a typing tuple of the following format: *<string_value, type>*; (b) creating a complete typing SET which contains all typing tuples in said type hierarchy ordered tree; (c) sorting said typing tuples in said SET by their first field, *string_value*; (d) creating, from sorted tuples in (c), ambiguity typing sequences for tuples having a common first field, *string_value*; (e) sorting and patching ambiguity typing sequences with dummy items; (f) creating a typing array by concatenating typing tuples in said sorted and patched ambiguity typing sequences; (g) for each type record node, N, in created typing array, if the intersection of a set of tuples in N with any ambiguity typing sequence is not empty, then replacing first typing tuple *<string_n,*

type_n> in N by (*string_n*, *type_n*, *offset*>, wherein *offset* represents a position of an ambiguity type in a given ambiguity typing sequence; (h) creating an index structure to link each *string_value* to its type; and (i) outputting said created index structure.

COMMENTS REGARDING PREVIOUSLY CITED WANG REFERENCE

Applicants present here a brief discussion with respect to the previously cited reference Wang et al. entitled “An Efficient Schema Typing System”, hereafter Wang. Applicants wish to respectfully note on the record that the newly added claims 27-41 cannot be anticipated or rendered obvious by the previously cited Wang reference.

For example, although Wang provides for a XML Schema Typing System that is based on finite state automata, it should be specifically noted that Wang fails to teach or suggest at least the following features:

- building a type hierarchy ordered tree from structured document with each type record node in said **hierarchy ordered tree containing a typing tuple** of the following format:
<string_value, type>;
- **creating a complete typing SET** which contains all typing tuples in said type hierarchy ordered tree;
- **sorting said typing tuples in said SET by their first field, string_value;**
- **creating, from sorted tuples, ambiguity typing sequences for tuples having a common first field, string_value;**
- **sorting and patching ambiguity typing sequences with dummy items;**

- **creating a typing array** by concatenating typing tuples in said sorted and patched ambiguity typing sequences;
- for each type record node, N, in created typing array, **if the intersection of a set of tuples in N with any ambiguity typing sequence is not empty, then replacing first typing tuple <string n, type n> in N by (string n, type n, offset)**, wherein offset represents a position of an ambiguity type in a given ambiguity typing sequence;
- **creating an index structure** to link each string_value to its type; and

If the examiner still feels that that such features are disclosed in a single reference or a combination of references, Applicants respectfully remind the examiner that it is the duty of the examiner to **specifically point out** each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that “the particular part relied on must be designated” and “the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified”.

SUMMARY

As has been detailed above, none of the references, previously cited or applied, provide for the specific claimed details of Applicants' presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This response is being filed with a request for extension of time. The Commissioner is hereby authorized to charge the extension fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-4098.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact Applicants' representative at the below number.

Respectfully submitted,

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October 25, 2007